ABSTRACT OF THE DISCLOSURE

MAC (Media Access Control) for an EPON (Ethernet Passive Optical Network system) defined in an IEEE (Institute of Electrical and Electronics Engineers) 802.3ah EFM (Ethernet in the First Mile) standard is implemented using general MAC based on an IEEE

5   802.3 standard. LLID (Logical Link ID) information is inserted at a predetermined position of a frame outside its preamble and the frame containing the LLID information is transferred to a higher layer so that general MAC can be used as MAC for the EPON system. A physical layer of the EPON system contains LLID information within a preamble and transfers the preamble containing the LLID information. An RS

10   (Reconciliation Sublayer) configures a new Ethernet frame by inserting the LLID information at a predetermined position of the Ethernet frame outside the preamble. The RS transfers the new Ethernet frame to a higher data link layer of the EPON system. The data link layer transfers the new Ethernet frame containing the LLID information.